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ABSTRACT

Arguing that a successful general education program depends upon an integrated curriculum, this paper urges community colleges to take a strong leadership role in developing a curriculum that is consistent with historical, cultural, and biological realities. After underscoring the need for interdisciplinary education, the paper provides a historical summary of the development of discipline-centered studies, stressing their advantages and limitations. Next, an overview of the current status of interdisciplinary studies is presented, examining the increase of interdisciplinary humanities enrollments; the forms in which interdisciplinary courses are offered (e.g., courses within the humanities, interdivisional courses, heritage-based courses, theme courses, and weekend classes); the various purposes served by these courses; and the interdisciplinary curriculum cores of Miami-Dade Community College and Los Medanos Community College. Cohen and Brawer's model for an integrated curriculum, which is organized around divisions in culture, communication, institutions, and environment, is then described and criticized for its failure to bridge the chasm between science and the arts. Finally, the urgency for developing an integrated curriculum is stressed given the risks and dangers facing society and the importance of broad understanding in the survival of the species. A list of global, educational and administrative issues related to the development of integrated curricula is appended. (LL)

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"Only Connect. . ."
A Passionate Plea for an Integrated Curriculum

AN ISSUE PAPER

PREPARED FOR
THE ARTS AND SCIENCES TASK FORCE
MARICOPA COMMUNITY COLLEGE DISTRICT

by
Dr. Alice M. Conkright

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"Only Connect. . ."

A Passionate Plea for an Integrated Curriculum

Pythagoras planned it. Why did the people stare?
His numbers, though they moved or seemed to move
In marble or in bronze, lacked character.
But boys and girls, pale from the imagined love
Of solitary beds, knew what they were,
That passion could bring character enough,
And pressed at midnight in some public place
Live lips upon a plummet-measured face.

. . .knowledge increases reality

W. B. Yeats, "The Statutes"

. . .knowledge is power--

Cohen and Brawer, The American Community College p. 318

Introduction

Passion, Character, Knowledge, Power. Those are big and sometimes meaningless words. And what's the connection, anyway? Does it take a poet to make it? We can be sure, though, that Yeats got himself a good interdisciplinary education. He knows all about the history of mathematics, philosophy, Greek civilization, and art; he even knows about plummets. But what's really interesting here is his insistence upon the need to revitalize knowledge. Yeats' faith in the ability of youthful passion to recreate, that is to play with and renew, intellectual "monuments" speaks to us today. Knowledge is power when it leads to an informed connection with physical, emotional, and social reality; knowledge increases unreality when it has tenuous or limited ties to that reality. In 1953, Whitehead (Winter and others, 1981, p. 165) raged against "the fatal disconnection of subjects which kills the vitality of our modern curriculum." In 1981, our neatly packaged subject approach to knowledge is even more disengaged from the fluid, volatile, dangerous reality of late 20th-century western civilization.

Through our discipline-oriented curriculum, we may be suggesting to our students that they live in a world where someone who is on intimate terms with a plummet doesn't need to

be familiar with the insights captured in poetry. Or that a TV anchorwoman doesn't need to understand the technology that shapes a culture. David Halliburton (1981, p. 456) describes a discipline "held together by paradigms, rules, and terminologies. . . as a reflection of reality." But a discipline also "deflects reality" because it is an "invented set of assumptions and practices." It cannot "be equal to all tasks." Educators traditionally have been frustrated by the difficulty of proving the superiority of any one curricular model, but a recent research study (Winter and others, 1981, 165) has shown that "institutions that stress the integration of ideas, courses, and disciplines are the ones whose students show the greatest growth in critical thinking." Moreover, the study demonstrates that liberal arts courses do significantly change students' cognitive skills, motivation, emotional maturity, and self-knowledge. Even without such empirical evidence, there appears to be a growing consensus that liberal arts or general education and interdisciplinary studies are intimately connected. The Nuffield Foundation Report (1975) on interdisciplinary studies noted that:

> interdisciplinarity provides a good general education; the student is confronted with a relativity of approaches and problems which he may well miss in a specialized degree. As such, interdisciplinarity inherits some of the impetus toward a more general curriculum and the emphasis on the development of general skills.

> The "applied" argument for interdisciplinary work is the one we have come across most frequently, and it may reflect an increasingly nonspecific relationship between higher education and employment. The less predictable students' career choices and patterns become, the more it seems sensible to give them a broad or multipurpose education. In this sense, interdisciplinarity can be seen as a reaction against overspecialisation. (In Halliburton, 1981, p. 469)

Currently in a fluid, if not volatile, state themselves, the community colleges, dedicated as they are to the concept of lifelong learning, are in an excellent position to take a leadership role in developing strong integrated general education curriculums. A successful curriculum for lifelong learning requires courses that are suitable to adult learners' developmental and social tasks. For all students, we must provide both a product, knowledge, and a process that is flexible and creative enough to allow students to act on that knowledge. If only the elite in private liberal arts colleges learn to understand and control their environment and their lives, we are ensuring that our students, many of whom are minorities, are only "second-best," condemned to little more than trade school or remedial ghettos. Central to my argument then is the contention that today a successful general education program is dependent on an

integrated curriculum, and the community college is the place to provide it.

Historical Summary

Before discussing an integrated curriculum, it's useful to remind ourselves that disciplinary studies rose not out of the needs of the students but of the faculty. The decline of the 19th-century, classical education was intimately tied to the success of the industrial revolution, with its demands for technically and managerially trained workers. A related cause was the need for college faculties to create themselves professionally by claiming ownership of a set of specialized skills quite distinct and separate from those of their colleagues in other disciplines. The inevitable next steps were the assigning of credit for courses; the creation of majors; and the formation of interdepartmental alliances to set distribution requirements. Community college faculty, trained in the university, modeled themselves and their programs after their mentors. The discipline-centered curriculum became so entrenched and so politically important to faculty survival that the rationale for its existence was rarely questioned (Cohen and Brawer, 1982, pp. 284-285). For example, St. John's College (New Mexico), with a curriculum organized around the Great Books, is so rare as to seem almost an aberration. Only a handful of other colleges--the

University of Wisconsin at Green Bay; St. John's College (Indiana); Evergreen State College (Washington); Los Medanos College (California)--have interdisciplinary studies at the core of their curriculum.

As Vars (1982, p. 218) has pointed out, the advantages of discipline-centered courses are obvious. They are convenient to schedule for the adminstration and the faculty; they make little demands on the staff for curriuculum development; they foster a sense of unity among students exposed to the same courses; and they force students to sample a variety of fields through distribution requirements. At the university, they indoctrinate the student into a profession and teach them a special vocabulary and a special way of perceiving the world.

The limitations of discipline-centered courses also are clearly evident. Students receive no direct help in integrating their diverse experiences; they lack any common intellectual experience; and they seldom see any models of integrative scholarship (Vars, 1982, p. 218). Moreover, such a curriculum was devised when the student population was almost exclusively 18-22 years old. Finally, the model is competitive, encouraging separation rather than cooperation. Halliburton (1981, p. 463) notes that disciplines are not necessarily even valid touchstones for the kind of learning that needs to be done today, that is, learning that focuses on creativity and problem solving. But still, he contends, the burden of proof rests on interdisciplinary studies: "They are still struggling to achieve consensus while the disciplines are struggling to maintain it. . . academic

disciplines represent order; interdisciplinary studies represent disorder."

It's not surprising, then, that those interdisciplinary courses that have been introduced throughout the years, particularly during the "relevant years," the 60's and early 70's, have always had an experimental cast to them; indeed many of them did not survive the final analysis. Frequently orphans within an academic department, they were relegated to the status of survey courses and characterized by superficiality of presentation, weak course content, and, in the 60's, a tendency to degenerate into rap sessions. Moreover, the lack of strong administrative promotion and support discouraged the faculty from expending the enormous resources of time and energy necessary to develop, teach, and maintain interdisciplinary courses.

A Contemporary Overview

However, within the last 10 years, a number of cultural factors have led to an increasing interest in interdisciplinary programs, and the impetus for them has come from humanities instructors. In the community colleges, legislative support for occupational courses; students' need for extensive remedial courses; the emphasis o personal development courses; and the students' rights movement all contributed to the decline in enrollment in humanities courses, already on the defensive since

1959. When comparing enrollment at 178 two-year colleges in spring 1975 and spring 1977, the Center for the Study of Community Colleges reported that enrollment was down 8% in history, 9.5% in music, and 12% in literature (Cantor, 1979, p. 2). Clearly, science instructors were not beating down the doors of English classrooms to talk about quantum physics; rather, the opposite was true. Yet, enrollment in interdisciplinary humanities courses was up 7%, an increase attributable perhaps to students' inability to fit more than one or two humanities courses into their overcrowded schedules. Interdisciplinary humanities courses also were seen as ways to entice students, not noticeably hungry for art and culture, into more specialized courses. And if all else failed, the students would at least have had broad exposure to the liberal arts in one course. The panic response may have provided the initial rush to create interdisciplinary programs, but the utilitarian bent of late 70's and early 80's education also forced community college faculty to recognize the dangers both for an individual and for society of an overspecialized and narrow career education.

Other social factors that provided the impetus for interdisciplinary courses in the community college were the huge increases in the number of adult learners enrolled as students both in academic and in the increasing popular community service courses. Both the cognitive styles and the developmental tasks of adults are more consistent with the interdisciplinary than with the disciplinary mode. Interdisciplinary courses deemphasize "processing and acquisition of large amounts of new information

[the strengths of late-adolescent learners], emphasizing instead the cognitive functions calling for integration, interpretation, and application of knowledge," [all strengths of adult learners] (Cross, 1981, p. 163).

The forms that interdisciplinary programs now in existence take vary greatly in focus, purpose, and organization. The most significant variant is between interdisciplinary courses, usually within the humanities that stay within a broad division of knowledge, and interdivisional courses that draw upon the seemingly unrelated disciplines of, for example, art and biology, or nursing and psychology. An example of an interdisciplinary course is the cultural heritage program at Pierce College (Los Angeles) that combines art, music, literature, philosophy, and history; an example of an interdivisional course is the four-course program at Saddleback Community College (California) centered around such themes as "Time, Space and Deity;" "Individualism--the Search for Meaning;" and "The City and the Sea." "Perspectives on Dying," another interdivisional course, is a joint effort of the humanities and nursing departments at Shoreline Community College (Washington). In both interdepartmental and interdivisional programs, the courses generally fall into three broad catagories: heritage based, thematic, and future oriented (Halliburton, 1981, pp. 460-463).

Heritage-based courses, such as Glendale Community College's (Arizona), which covers the paleolethic era to the present, or Columbia State Community College's (Tennessee) series of freshman tutorials based on the "great ages of man" are the most familiar

interdisciplinary programs. Thematic courses or programs are also popular: Phoenix College's (Arizona) interdisciplinary humanities course ("I-We," Fall 1982), and Mendocino College's (California) "World Food Crisis" course are representative. Future-oriented courses--"The Dynamics of Change" or "Technology and the Future"--are rarer in the community colleges. The focus and scope of the course determines the method of instruction. Most are team taught, with two or more instructors, each representing a discipline; fewer are taught by a single instructor.

As might be expected, most interdisciplinary courses, whether they are discrete one-, two-, or three-credit courses, or whether they are modules designed to fit into other courses, fit into the traditional semester or year-long curricular organization. However, there are some exceptions. To serve the needs of union members, Florissant Valley College (Missouri) uses block-scheduled, weekend classes and television courses. Los Angeles' Harbor College has an onsite PACE program for people employed full time that uses a combination of weekly seminars, weekend conferences, and public TV. Other successful structures include semesters divided into nine blocks of three and one-half weeks each, with a student taking only one course per block; and an organization of fourteen modules, each worth one unit and each two weeks long.

Within a college's curricular structure, interdisciplinary programs serve various purposes. Some are generic courses that are prerequisites for disciplinary courses; many are humanities electives. Increasingly popular are humanities and ethical

modules inserted into occupational and health programs and semester-long courses designed to integrate the occupations and the humanities. The "Introduction to Ethics" program at Skagit Valley College (Washington), the "Ethical Issues in American Health Care" at Johnson County Community College (Kansas), and "Literature for Technicians" at Chemeketa Community College (Oregon) are typical examples. Special audiences, such as senior citizens, also are served by interdisciplinary programs. "Gertrain," the modular interdisciplinary program at Monterey Peninsula College (California), is an exemplary model of such a program. Other programs serve the needs of midcareer or pre-retirement audiences.

Since integrated curriculums still must prove themselves, it is not surprising that only the newer community colleges have such programs at the heart of their curricular structure. Miami-Dade Community College (Florida) has an Intercurricular Studies Division that offers a two-semester interdisciplinary, general education course. The discipline courses are treated not as separate entities but as different and interrelated approaches to concepts and problems. In 1978, Miami-Dade's core of five interdisciplinary courses consisted of "Communications," "The Social Environment," "The Natural Environment," "Humanities," and "The Individual" (Cohen and Brawer, 1982, p. 331). Los Medanos Community College (California), instituted in the midseventies, developed an integrated curriculum in the planning stages of the school. The curricular core is six generic courses in behavioral, social, biological, and physical sciences, and in language

arts and the humanities that are prerequisites for specialized courses. The college is organized into four divisions, each headed by a dean.

Evident in the Los Medanos plan are the six elements that Cohen and Brawer (1982, pp. 334-335) insist are necessary for a successful integrated general education curriculum: (1) a separate general education interdisciplinary faculty with (2) an administrative head; (3) vertical organization along the lines of a nursing program; and (4) organizational management and support at the campus level. The Los Medanos program, however, honors traditional disciplinary and divisional lines.

A Utopian Model

In Cohen and Brawer's plan for a model integrated general education curriculum, (1982, pp. 334-340) the first requirement is a separate general education faculty with its own budget. Organized into four divisions--Culture, Communications, Institutions, and Environment--the general education faculty would prepare and teach the integrated courses and course modules; administer course-exemption examinations; conduct student follow-up studies; and maintain relationships with high school and senior institutions. Each of the four divisions would design course modules for occupational courses in cooperation with the occupational faculty. Thus, a course in automotive maintenance

would include three or four general education modules, one from each division. The four divisions also would build one course each, organized around themes, to be required for degree students. To summarize, the general education faculty would build modules and specifically designed courses for the occupational students; as well as theme-centered courses for the occupational students; theme-centered courses for the degree and transfer students; and special problem-centered courses for community education. The four divisional theme-centered courses might supplant most of the interdisciplinary courses offered but would not do away with the discipline courses. Ideally, the relationship between the interdisciplinary and disciplinary courses would not be antagonistic but would be dialectical.

Although Cohen and Brawer regard their model as Utopian, it is, in one sense, limited. What is missing in their four division organization is a conscious attempt to bridge the chasm between science and the arts. Science primarily stores facts, art primarily stores emotion; both are means of human communication, voices of a communal consciousness. The student of Hemingway needs to be familiar with WWI and Darwin as much as the student of physics needs to "know" Picasso's Guernica and read at least a chapter or two of Joyce's Ulysses (1922). Moreover, it is not just occupational courses that need humanities modules. In a child-development course, Piaget may supply the cognitive levels, Erickson may provide the developmental levels, but Tillie Olsen's short story, As I Stand Here Ironing (1971), supplies the pain of motherhood at an emotional level that changes our lives.

A Passionate Plea

And yet, what is at issue here is not whether Joyce can be understood without knowing Enstein, or whether students of auto mechanics should read Zen and the Art of Motorcycle Maintenance (1974). What is really at issue is the development of a curriculum that is consistent with our historical, cultural, and biological reality. Halliburton (1981, p. 463) suggests that we are in the midst of a paradigm shift similar to the change from a Plotemaic earth-centered cosmology to a Copernican sun-centered model. Already we can see the destruction of old institutions and social forms and the emergence of new ones. For example, the widespread interest in humanistic psychology, wholistic medicine, biofeedback, consumer advocacy, and natural foods, as well as the ecclogical movement with its emphasis on the interdependence of all living forms; the women's movement with its merging of sexual roles; the movements to protect the rights of children, of students, of the mentally handicapped, even of trees; all are new ways of perceiving reality. They suggest that we are moving toward a model of democratically ordered universe with nature, including man, at the center. Lewis Thomas (1974, p. 7), a physician, a biologist and head of Sloan-Kettering Cancer Institute, tells us that biologists are discovering that symbiosis and cooperation, not aggression and competition, are at the

heart of nature; aggression is a secondary defense to preserve individual identity. Life is not hostile to life. A case can be made that this is empirical verification for centuries-old, intuitive, religious truths: "The kingdom of God is within you; love your neighbor as yourself."

Perhaps we are approaching the end of the era of Cartesian dualism, the mind/body, I/You split that began with the Rennaissance and came to fruition in the 19th-century individualistic, nationalistic, and authoritarian consciousness. Nowhere has the extreme 20th-century version of the era of isolated ego been played out more vividly than in Spielberg's movie E.T. (except, perhaps, for John Hinckley's desperately bizarre attempt at union with Jodie Foster). In E.T., to be a late 20th-century male is to be paranoid and aggressive; it is to know how to separate, dissect, analyze, and destroy. Spielberg's alter ego, the "good scientist," somehow escaped being educated out of his natural instinct to recognize himself in the "other," "the familiar" in the alien.

Just as the childlike, God-centered, Medieval world blossomed into the adolescent-like, human-centered Renaissance world, perhaps our own era can mature into a responsible nature-centered world that integrates the two. Perhaps the elitist, classical curriculum of the 18th century transformed into the competitive discipline/professional curriculum of the 19th and 20th centuries can mature into a democratic, integrated curriculum for the 21st century. Scientists tell us that when any natural phenomenon reaches its extreme limits, under great

pressure, metamorphosis takes place--liquid becomes gas, wood becomes stone. Our academic disciplines, overspecialized and bulging at the seams, as Halliburton (1981, p. 463) characterizes them, could become integrated. The old would not be lost; it would be transformed.

Any transitional period, whether in an individual or a society, is characterized by risk and danger, and often by violence and chaos. Most of us would recognize our own as such a period, and if we don't, a glance at Los Medanos College's list of twelve world problems that should be addressed by the community college curriculum should enlighten us. We are asked to deal with

> the threat of nuclear annihilation
> the physical and psychological inundation of population
> the cybernation of postindustrial corporate stage
> the limits of national sovereignty in a nuclear age
> the alienation and illnesses of the spirit
> the erosion of credibility and faith in the democratic process
> the loss of conscience and the dimming of outrage toward evil
> the issue of a bridled or unbridled science and technology
> the failure to accept a pluralism of race, of culture, of life-styles

the accomodation to new modes of creativity and self-expression

the creation of a new morality and a new ethic to fit a different social order. (Carhart and Collins, 1973, p. 3)

In actuality, the list of twelve could be reduced to one--the threat of nuclear annihilation. If we don't solve that problem, the rest become meaningless; and yet its resolution seems dependent on solutions to the other eleven. Luckily, transitional periods are also characterized by great energy, creativity, and imagination. We need to harness these forces to prepare students for an uncertain future, indeed perhaps for a nonexistent future. At this very moment, at 4:00 p.m. on Monday, August 9, 1982 (the 40th anniversary of the Hiroshima bomb), a news item comes over the radio. The Vatican, relying on a report from the Stockholm Institute of Scientists, predicts that a nuclear war will start on June 15, 1985. Within hours, 350,000 people will be dead, 750,000 will be wounded. The earth will become a desert overrun by mice. Yet the radio "Music for Serenity" continues; my neighbors, most of them young mothers, don't rush out into the streets screaming with rage. I go on writing. At dinnertime, neither Dan, Kent, or Mary Jo mention the Vatican prophesy of doom as I jog on my trampoline to the music of Israeli bombs dropping on Lebanon. There's a knock on the door. Three young boys, on a scavenger hunt, hope that I can provide them with blue toilet paper, Cheerios, and a candy-bar

wrapper. As a responsible, ecologically minded adult, I don't buy those things; I can give them nothing. Later, I call my twenty-year-old daughter in Rhode Island. We talk about her weekend with her boyfriend at a New Hampshire lake and her strategy for getting more financial aid to pay the $13,400 necessary to complete her college education and become a mature, responsible adult. I don't mention the Hiroshima anniversary or the Vatican report. . . the connection is bad. How are we to live in this world?. . . knowledge increases reality.

In the early years of the 20th century, the novelist E.M. Forester (1921, pp. 186-187) pleaded with his small, elite public: "Only Connect!" In the waning years of the 20th century, the astronomer Carl Sagan, before a television audience of several million people, argued with the voice of a poet for the survival of our species: "We are starstuff, harvesting starlight. The earth is a single organism. We speak for the earth." If we, as teachers, adults, and citizens, are not to become like statues, mouthing worn-out tapes Disneyland-style, we must submit ourselves to our students' passion to know, to survive. We and our students speak for earth, and the stage is about to go dark. We must get our act together.

Issues

I. Global

1. How are we to survive? Should we survive? How should we--as individuals, as citizens, as teachers, as members of the human species, and as part of a single planetary organism--respond to the historical and biological imperative to grow, to change, to adapt, or to die?

2. How are we to live? How can we use the past to create the future? How, as educators, can we insure that knowledge and power reside within the citizen and not "out there"--in the textbook, the teacher, the boss, the boardroom, the bureaucracy, the Pentagon, the White House, the international power structure?

II. Educational

1. Have general education and an integrated curriculum become synonomous? If so, how do we articulate and promote the necessary transformation?

2. Given a severely depressed economy with an increasing emphasis on occupational and developmental education, how can the community colleges develop a coherent curriculum and maintain its collegiate function?

3. Do our curriculum and teaching modes reflect the nature of reality in the late 20th century? Do they reflect the reality of our students' lives? Do they promote the developmental needs--ranging from mastery and intimacy to integration, responsibility, and reflection--of a student population that ranges from 16-60+? Do they promote the cognitive modes necessary for a society in transition--the need for imagination, creativity, flexibility, for problem solving and problem finding? Does the educational process itself negate the desired product, that is, an interpersonal style that promotes synthesis, cooperation, and community rather than fragmentation, competitiveness, and separation?

4. How are we to teach students to both know and to act?

III. Political

1. What kind of college organization is necessary for an integrated curriculum? How would the academic

disciplines fit into the structure? What should the relationship between the district and campus be?

2. What is the best strategy to gain the essential district and college administrative support for an integrated curriculum?

3. What are the best strategies to get the necessary funds for curriculum development and staff development?

4. What are the best strategies to gain the essential faculty support for an integrated curriculum? How can we work with the political power of the existing department or division organization?

5. What is the best way to develop existing faculty to work both with and within an integrated curriculum? What would be the hiring qualifications for new faculty members?

6. How can we articulate an integrated curriculum with university transfer requirements?

7. How can vocational and developmental education instructors, already overburdened with requirements

and students' immediate needs, be convinced of the value of integrated curriculum?

8. What should the strategies be for promoting an integrated general education curriculum to students? To the community? What are the community's needs?

9. What new or expanded support services would be necessary to insure the success of an integrated curriculum?

10. How can an open-entry/open-exit admissions policy, based on the rights of students to choose their own learning experience, be reconciled with an integrated general education curriculum?

11. How can we insure that an integrated general education curriculum does not succumb to the forces--lack of trained faculty, faculty overwork, lack of student and administrative support, a narrow utilitarian education focus--that have caused interdisciplinary programs to fragment into disciplinary courses in the past?

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